CLAIMS

1. A method for adjusting a particle size of retinoic acid nanoparticles comprising micelles of retinoic acid coated with an inorganic salt of polyvalent metal, the method comprising:

dispersing retinoic acid dissolved in a lower alcohol in an aqueous alkali solution;

adding a nonionic surfactant to the dispersion to form a mixed micelle;

adding to the micelle a halide or acetate of divalent metal along with a carbonate or phosphate of alkali metal so that a molar ratio of the former to the latter is 1:0 to 1:1.0, thereby depositing a coating of the inorganic salt of the polyvalent metal on a surface of the micelle; and

adjusting an average particle size of the resulting nanoparticles to 5 to 300 nm.

2. The method for adjusting a particle size of retinoic acid nanoparticles coated with an inorganic salt of polyvalent metal according to claim 1, wherein the coating of the inorganic salt of the polyvalent metal is calcium carbonate, zinc carbonate, or calcium phosphate coating.

3. The method for adjusting a particle size of retinoic acid nanoparticles coated with an inorganic salt of polyvalent metal according to claim 1, wherein the halide or acetate of divalent metal is calcium halide, zinc halide, calcium acetate or zinc acetate.

4. The method for adjusting a particle size of retinoic acid nanoparticles coated with an inorganic salt of polyvalent metal according to claim 3, wherein the calcium halide or the zinc halide

is selected from the group consisting of calcium chloride, calcium bromide, calcium fluoride, calcium iodide, zinc chloride, zinc bromide, zinc fluoride and zinc iodide.

5. The method for adjusting a particle size of retinoic acid nanoparticles coated with an inorganic salt of polyvalent metal according to claim 1, wherein the carbonate or phosphate of alkali metal is selected from the group consisting of sodium carbonate, potassium carbonate, sodium phosphate, and potassium phosphate.

6. The method for adjusting a particle size of retinoic acid nanoparticles coated with an inorganic salt of polyvalent metal according to claim 1, wherein the lower alcohol is methanol or ethanol.

7. The method for adjusting a particle size of retinoic acid nanoparticles coated with an inorganic salt of polyvalent metal according to claim 1, wherein the nonionic surfactant is polyoxyethylene (20) sorbitan monooleate, polyoxyethylene (20) sorbitan monolaurate, polyoxyethylene (20) sorbitan monostearate, polyoxyethylene (20) sorbitan monopalmitate, polyoxyethylene (20) sorbitan trioleate, polyoxyethylene (8) octylphenylether, polyoxyethylene (20) cholesterol ester, polyoxyethylene (30) cholesterol ester or polyoxyethylene hydrogenated castor oil.

8. The method for adjusting a particle size of retinoic acid nanoparticles coated with calcium carbonate claimed in claim 1, comprising micelles of retinoic acid coated with calcium carbonate, the method comprising:

dispersing retinoic acid dissolved in a lower alcohol in an aqueous alkali solution;

adding a nonionic surfactant to the dispersion to form a mixed

micelle;

adding to the micelle calcium chloride and sodium carbonate so that a molar ratio of the former to the latter is 1:0 to 1:1.0, thereby depositing a coating of calcium carbonate on a surface of the micelle; and

adjusting the average particle size of the resulting nanoparticles to 5 to 300 nm.

9. The method for adjusting a particle size of retinoic acid nanoparticles coated with calcium carbonate according to claim 8, wherein the lower alcohol is methanol or ethanol.

10. The method for adjusting a particle size of retinoic acid nanoparticles coated with calcium carbonate according to claim 8, wherein the nonionic surfactant is polyoxyethylene (20) sorbitan monooleate, polyoxyethylene (20) sorbitan monolaurate, polyoxyethylene (20) sorbitan monostearate, polyoxyethylene (20) sorbitan monopalmitate, polyoxyethylene (20) sorbitan trioleate, polyoxyethylene (8) octylphenylether, polyoxyethylene (20) cholesterol ester, polyoxyethylene (30) cholesterol ester or polyoxyethylene hydrogenated castor oil.

11. Retinoic acid nanoparticles coated with an inorganic salt of polyvalent metal and having an average particle size of 5 to 300 nm, obtained by the adjusting method according to any of claims 1 to 7.

12. Calcium carbonate-coated retinoic acid nanoparticles obtained by the adjusting method according to any of claims 8 to 10 and having an average particle size of 5 to 300 nm.

13. Calcium carbonate-coated nanoparticles having an

average particles size of 5 to 300 nm and comprising retinoic acid micelles coated with calcium carbonate.

14. Zinc carbonate-coated nanoparticles having an average particles size of 5 to 300 nm and comprising retinoic acid micelles coated with zinc carbonate.

15. Calcium phosphate-coated nanoparticles having an average particles size of 5 to 300 nm and comprising retinoic acid micelles coated with calcium phosphate.